

REMARKS

This paper responds to the Office Action mailed on July 27, 2005.

Claims 8 and 9 are amended, no claims are canceled, and no claims are added; as a result, claims 3, 5, 7-42 and 65 are now pending in this application.

Information Disclosure Statement

Applicant submitted a Supplemental Information Disclosure Statement and a 1449 Form on September 9, 2004, and a copy of the same with the response filed on May 11, 2005. To date, Applicant has not received an initialed copy of this 1449 Form. Applicant respectfully requests that an initialed copy of the 1449 Form, showing the cited references as having been considered by the Examiner, be returned to Applicant's representatives with the next official communication.

Objection to the Claims

The outstanding Office Action at section 2 on page 2 objects to claims 8-12, for claim 8 language of "having a discontinuous island structure", and "discontinuous islands", and claim 9 language of having "discontinuous island structure" recited twice. Applicant respectfully submits that the phrasing would be clear to one of ordinary skill, but has amended claims 8 and 9 in accordance with the Examiner's comments. Applicant requests that this objection be withdrawn.

§112 Rejection of the Claims

Claims 3, 5, 7-42 and 65 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Applicant respectfully traverses this rejection.

Specifically, the outstanding Office Action states that even "though the specification discloses a seed layer having seed islands on a substrate, there is no indication that the substrate is of insulating material". "The examiner interpreted that in the normal situation the substrate is of a semiconductor material having conductive portions that would be connected to the

subsequently formed interconnects”, and “the individual elements of the discontinuous seed layer are not electrically isolated from each other”. Applicant respectfully disagrees.

Applicant respectfully submits that even if the Examiner’s statement were correct, the conclusion, that the seed layer islands would not be electrically isolated, would still be incorrect. This is because since it is admitted that the “...semiconductor material having conductive portions...” would be connected to “...subsequently formed interconnects...”, then unless each and every one of the subsequently formed interconnects are all connected to a single power source or signal, the “conductive portions” would have to be electrically isolated from each other. Thus, the recited seed islands formed on the substrate having conductive portions (and thus non conductive portions) could be electrically isolated from one another, as claimed, if the seed layer itself is formed in separate islands. Therefore, even if the Examiner is correct, and the use of the term “substrate” means a semiconductor material, the recited “...*individual elements of the discontinuous seed layer are substantially electrically isolated from each other ...*”, as found in claim 7, is still believed to be supported by the specification.

Applicant respectfully submits that the substrate, as taught in the specification, is not a simple semiconductive material. The specification on page 6, lines 15-25 states that “substrate is used in the following description include an structure having an exposed surface with which to form the integrated circuit (IC) structure”, which would indicate to one of ordinary skill that the additional layers, such as insulator layers, that are typically used in IC fabrication would be included. The “term substrate is understood to include semiconductor wafers”, which clearly indicates that things other than just semiconductor materials are included in the term substrate. “The term substrate is also used to refer to semiconductor structures during processing, and may include other layers that have been fabricated thereupon”, which would indicate to one of ordinary skill that other layers, such as oxide or nitride layers with or without contact holes, are included in the use of the term substrate. Therefore, Applicant submits that the Examiner’s assumption that the term “substrate”, as used in the claims in question, is restricted to semiconductor materials, is incorrect.

The specification and associated figures disclose that the seed layer may be formed over photoresist layers. This may be seen at least at page 10, line 14, where the discontinuous seed layer 216, is formed over the combination surface of photoresist pattern 208 and metal filled

contacts 210, as shown in figure 2D. Therefore, Applicant submits that it would be clear to one of ordinary skill in the art, that the discontinuous seed layer may be formed over substrates that are not restricted to semiconductor materials.

Applicant respectfully submits that the use of the term substrate does find support in the specification as including materials beyond simple semiconductor materials, and that the described embodiments include discontinuous seed layers over substrates including insulative materials such as photoresist. In view of the above discussion and amendments, Applicant respectfully requests that this rejection be reconsidered and withdrawn.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney David Suhl at 508-865-8211, or the below-signed attorney at (612) 373-6951, to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,


KIE Y. AHN ET AL.

By their Representatives,

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Date October 27, 2005

By


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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop Amendment, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 27 day of October, 2005.

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Name

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Signature